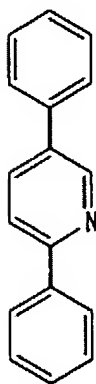


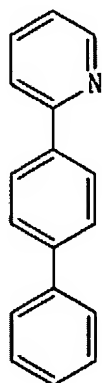
CLAIMS

1. An organic electroluminescent display device comprising:
a substrate;
a first electrode and a second electrode formed on the substrate; and
an organic film layer comprising at least one emitting layer between the first electrode and the second electrode,
wherein the emitting layer comprises at least one phosphorescent dopant, and the dopant is represented by L_2ML' , and wherein the M is a transition metal selected from the group consisting of Ir, Pt, Zn and Os, the L and L' are bidentate ligands coordinated with carbon and nitrogen, and at least one of the L and L' has 15 or more carbon atoms in the ligand.
2. The organic electroluminescent display device according to claim 1, wherein at least one of the L and L' has at least two hexagonal ring structures in the ligand.
3. The organic electroluminescent display device according to claim 1, wherein the emitting layer comprises subsidiary pixels of a red emitting layer, a green emitting layer and a blue emitting layer.
4. The organic electroluminescent display device according to claim 3, wherein the blue emitting layer is a fluorescent emitting layer.
5. The organic electroluminescent display device according to claim 3, wherein the blue emitting layer comprises the phosphorescent dopant, and any one of the L and L' comprises a dopant having less than 15 carbon atoms in the ligand.
6. The organic electroluminescent display device according to claim 1, wherein the L and L' are not identical to each other, and are any one compound selected from the following chemical formulas 1 to 15:

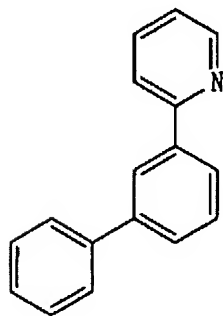
Chemical Formula 1



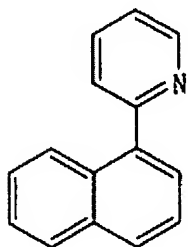
Chemical Formula 2



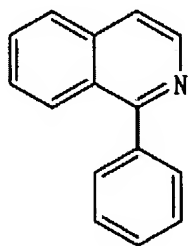
Chemical Formula 3



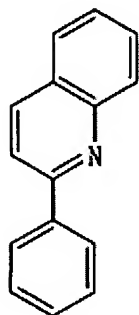
Chemical Formula 4



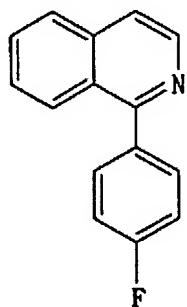
Chemical Formula 5



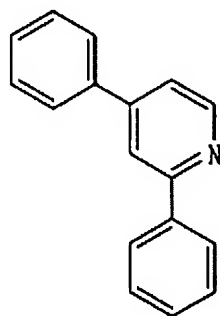
Chemical Formula 6



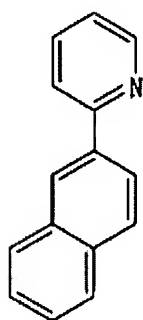
Chemical Formula 7



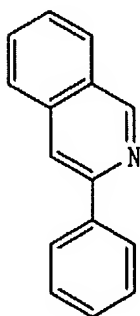
Chemical Formula 8



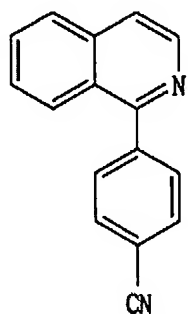
Chemical Formula 9



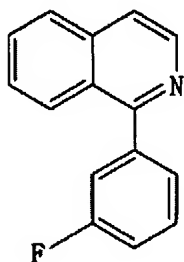
Chemical Formula 10



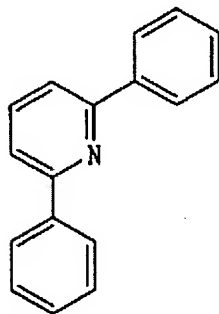
Chemical Formula 11



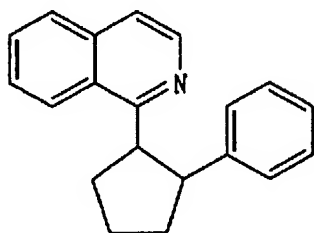
Chemical Formula 12



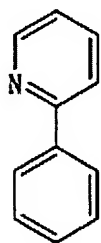
Chemical Formula 13



Chemical Formula 14

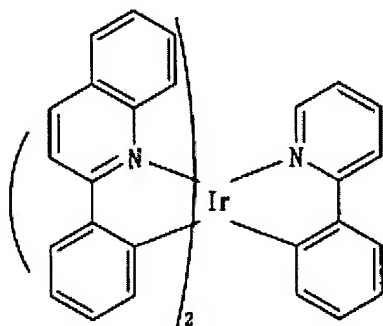


Chemical Formula 15

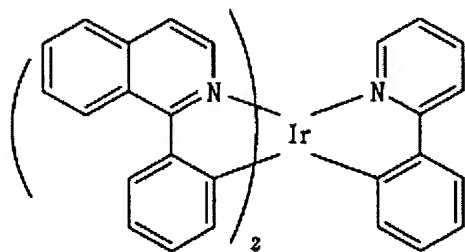


7. The organic electroluminescent display device according to claim 1, wherein the L2ML' is a compound represented by the following chemical formulas 16 to 22:

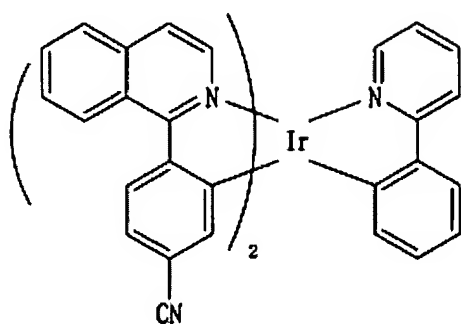
Chemical Formula 16



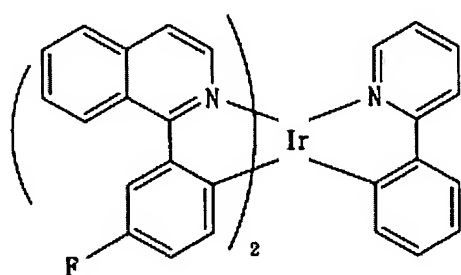
Chemical Formula 17



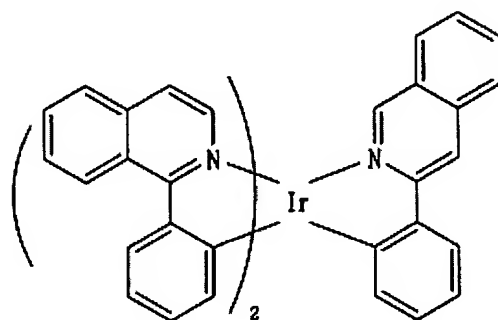
Chemical Formula 18



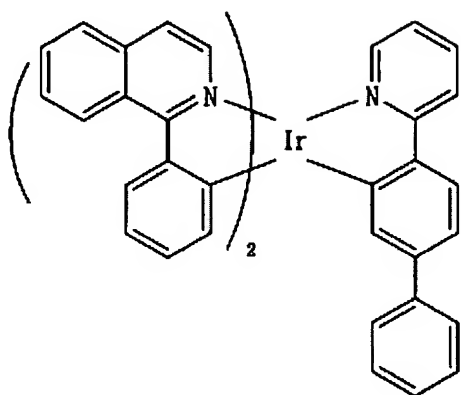
Chemical Formula 19



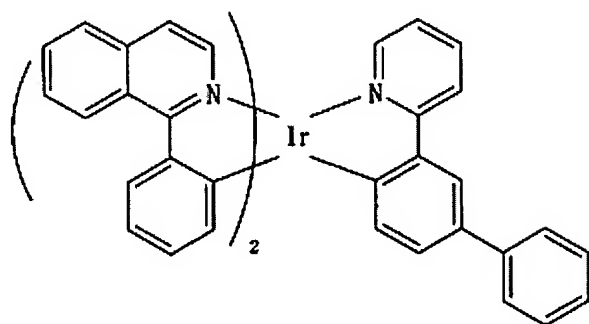
Chemical Formula 20



Chemical Formula 21



Chemical Formula 22



8. The organic electroluminescent display device according to claim 1, wherein the organic film layer further comprises at least one layer selected from a hole injection layer, a hole transport layer, an electron transport layer, an electron injection layer and a hole blocking layer.

9. The organic electroluminescent display device according to claim 8, wherein the organic film layer comprises a red emitting layer, a green emitting layer and a blue fluorescent emitting layer, and wherein the hole blocking layer is formed on an upper part of the red emitting layer and the green emitting layer.

10. The organic electroluminescent display device according to claim 4, wherein the blue fluorescent emitting layer is formed on an upper part of the red and green phosphorescent emitting layers over a front surface of the substrate as a common layer.

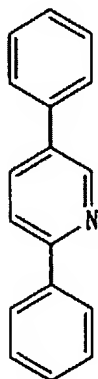
11. The organic electroluminescent display device according to claim 1, wherein the second electrode is a cathode electrode if the first electrode is an anode electrode, and the second electrode is an anode electrode if the first electrode is a cathode electrode.

12. An organic electroluminescent display device comprising:
a substrate;
a first electrode and a second electrode formed on the substrate; and
an organic film layer comprising at least one emitting layer between the first electrode and the second electrode,
wherein the emitting layer comprises at least one phosphorescent dopant, and the dopant is represented by L3M, and wherein the M is a transition metal selected from the group consisting of Ir, Pt, Zn and Os, and the L is a bidentate ligand coordinated with carbon and nitrogen and has 15 or more carbon atoms in the ligand.

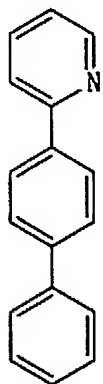
13. The organic electroluminescent display device according to claim 12, wherein the L has at least two hexagonal ring structures in the ligand.

14. The organic electroluminescent display device according to claim 12, wherein the L is any one compound selected from compounds represented by the following chemical formulas 1 to 14:

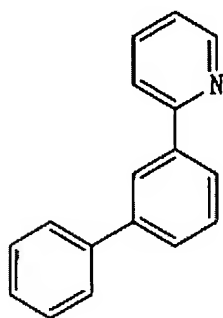
Chemical Formula 1



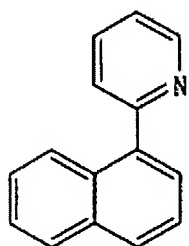
Chemical Formula 2



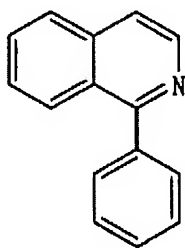
Chemical Formula 3



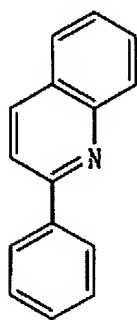
Chemical Formula 4



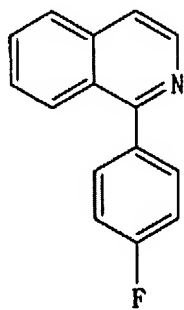
Chemical Formula 5



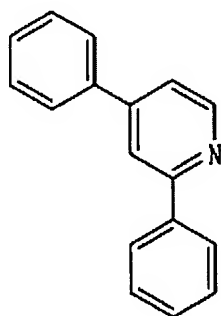
Chemical Formula 6



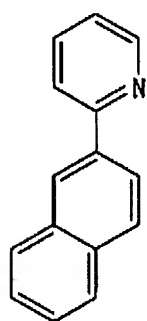
Chemical Formula 7



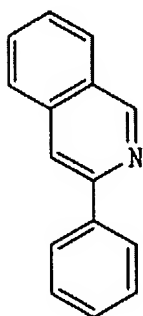
Chemical Formula 8



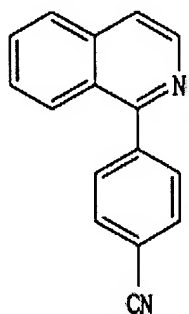
Chemical Formula 9



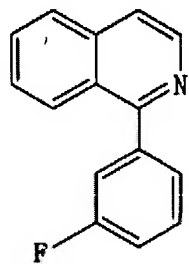
Chemical Formula 10



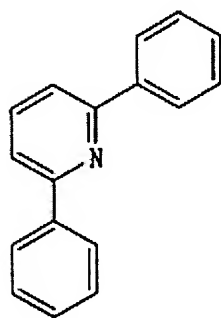
Chemical Formula 11



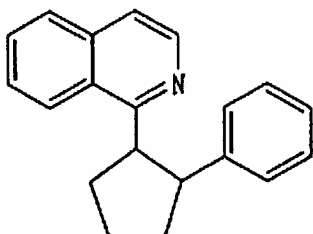
Chemical Formula 12



Chemical Formula 13

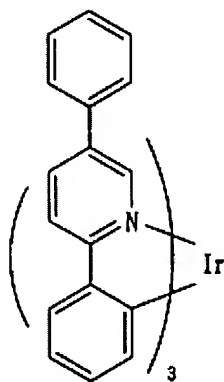


Chemical Formula 14

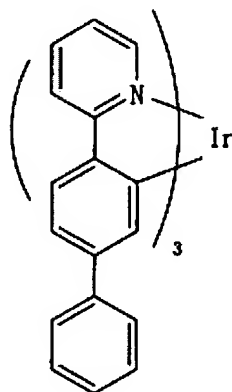


15. The organic electroluminescent display device according to claim 12, wherein the L3M is a compound represented by the following chemical formulas 23 to 31:

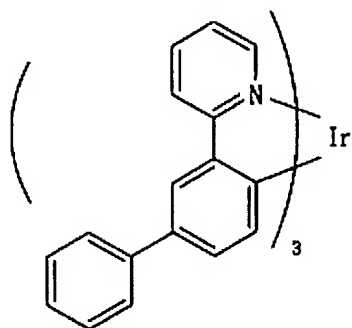
Chemical Formula 23



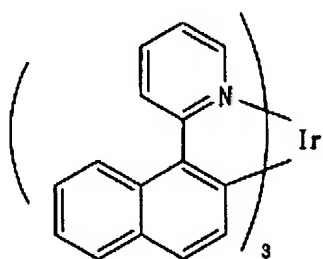
Chemical Formula 24



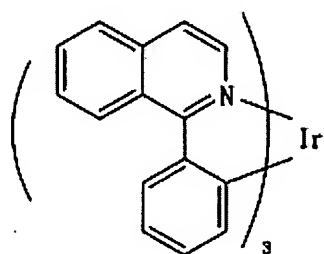
Chemical Formula 25



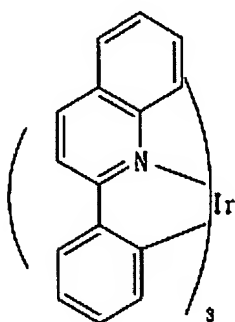
Chemical Formula 26



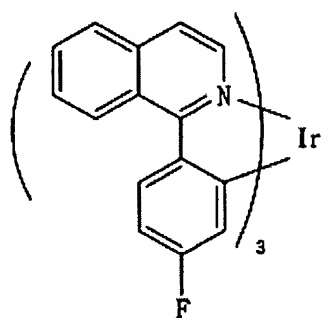
Chemical Formula 27



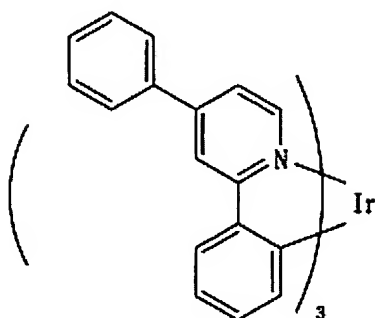
Chemical Formula 28



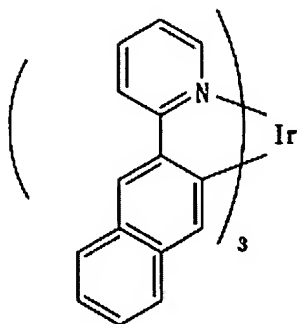
Chemical Formula 29



Chemical Formula 30



Chemical Formula 31



16. The organic electroluminescent display device according to claim 12, wherein the emitting layer comprises a red emitting layer, a green emitting layer and a blue emitting layer to generate red, green and blue colors, respectively, using subsidiary pixels.

17. The organic electroluminescent display device according to claim 16, wherein the blue emitting layer is a blue fluorescent emitting layer.

18. The organic electroluminescent display device according to claim 17, wherein the blue fluorescent emitting layer is formed on an upper part of the red and green phosphorescent emitting layers over a front surface of the substrate as a common layer.

19. The organic electroluminescent display device according to claim 12, wherein the organic film layer further comprises at least one layer selected from a hole injection layer, a hole transport layer, an electron transport layer, an electron injection layer and a hole blocking layer.

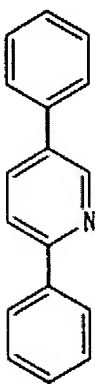
20. The organic electroluminescent display device according to claim 19, wherein the organic film layer comprises a red emitting layer, a green emitting layer and a blue fluorescent emitting layer, and wherein the hole blocking layer is formed on an upper part of the red emitting layer and the green emitting layer.

21. The organic electroluminescent display device according to claim 12, wherein the second electrode is a cathode electrode if the first electrode is an anode electrode, and the second electrode is an anode electrode if the first electrode is a cathode electrode.

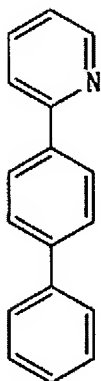
22. An emitting compound having a chemical structure of L_2ML' or L_3M , wherein the M is a transition metal selected from the group consisting of Ir, Pt, Zn and Os, the L and L' are bidentate ligands coordinated with carbon and nitrogen, and at least one of the L and L' has 15 or more carbon atoms in the ligand.

23. The emitting compound according to claim 22, wherein the L and L' are not identical to each other and are any one compound of the following chemical formulas 1 to 15:

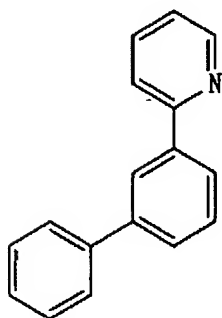
Chemical Formula 1



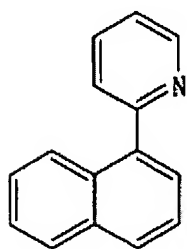
Chemical Formula 2



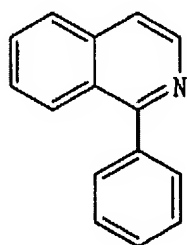
Chemical Formula 3



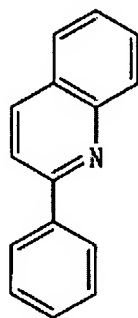
Chemical Formula 4



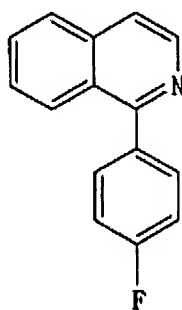
Chemical Formula 5



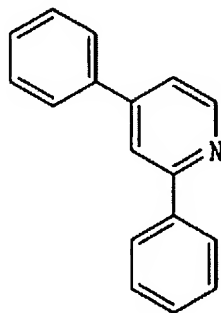
Chemical Formula 6



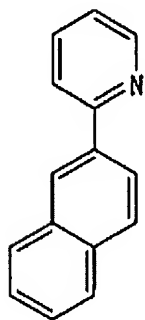
Chemical Formula 7



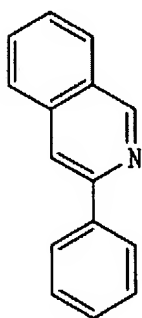
Chemical Formula 8



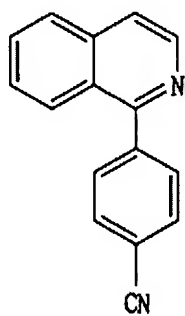
Chemical Formula 9



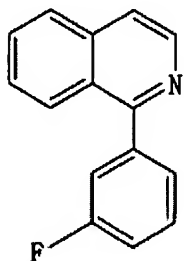
Chemical Formula 10



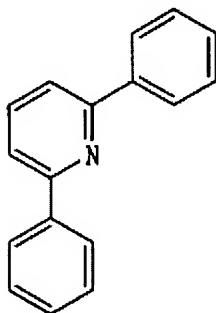
Chemical Formula 11



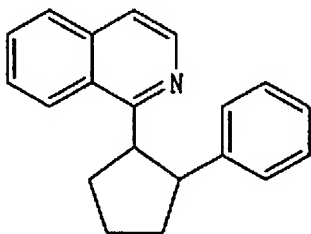
Chemical Formula 12



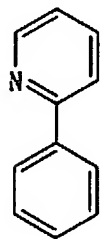
Chemical Formula 13



Chemical Formula 14

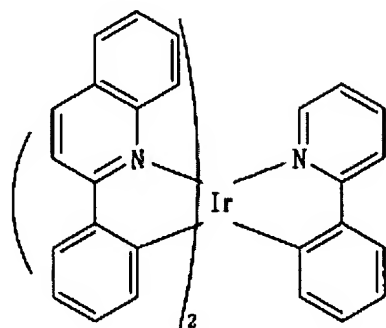


Chemical Formula 15

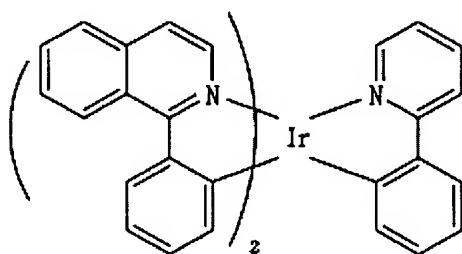


24. The emitting compound according to claim 22, wherein the L2ML' is any one compound selected from compounds represented by the following chemical formulas 16 to 22:

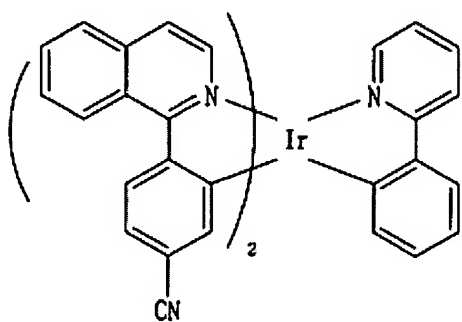
Chemical Formula 16



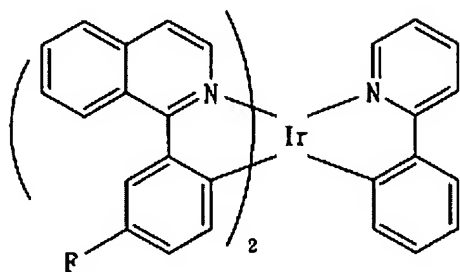
Chemical Formula 17



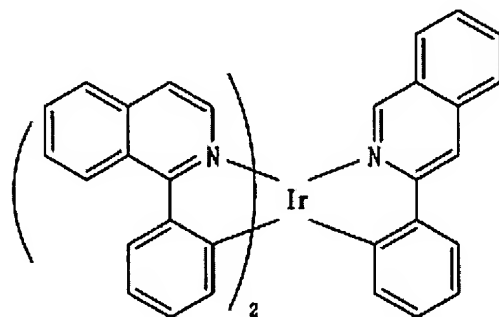
Chemical Formula 18



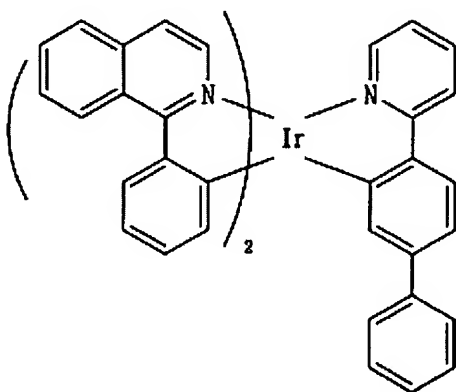
Chemical Formula 19



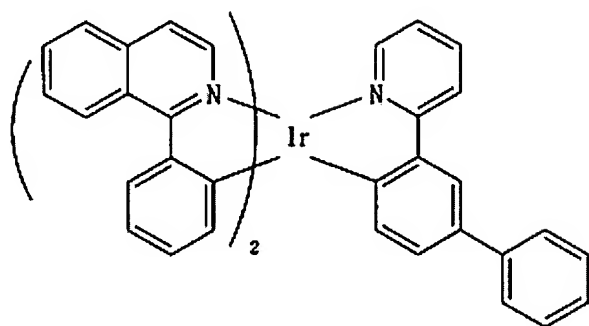
Chemical Formula 20



Chemical Formula 21

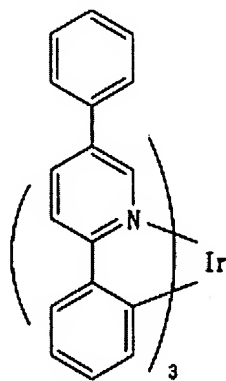


Chemical Formula 22

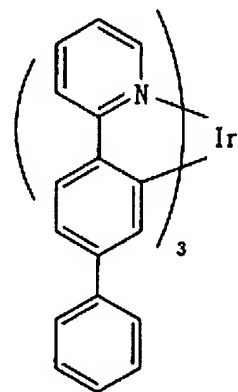


25. The emitting compound according to claim 22, wherein the L3M is any one compound selected from compounds represented by the following chemical formulas 23 to 31:

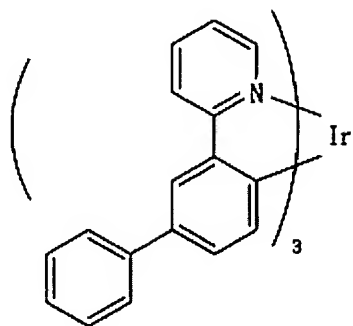
Chemical Formula 23



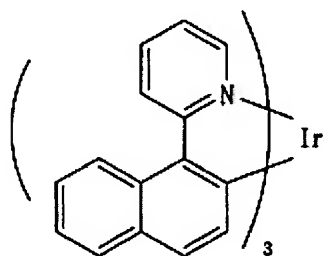
Chemical Formula 24



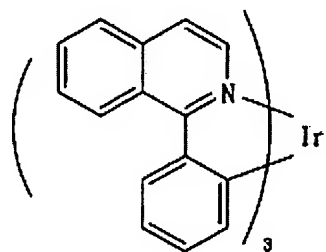
Chemical Formula 25



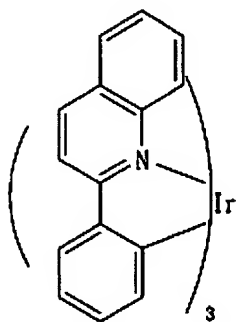
Chemical Formula 26



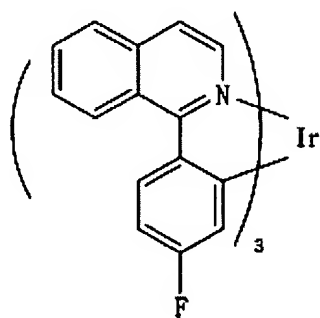
Chemical Formula 27



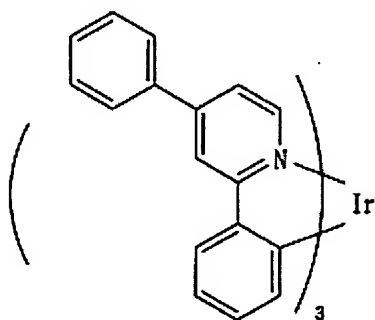
Chemical Formula 28



Chemical Formula 29



Chemical Formula 30



Chemical Formula 31

